REMARKS

The above-identified patent application has been amended and reconsideration and re-examination are respectfully requested.

The Examiner renumbered claims 21-25 as 20-24.

The Examiner objected to the drawings because of a missing reference designation. Application has corrected this by amending the specification replace reference designation "21c" with --21b--. Applicant will submit substitute drawings upon an indication of allowable subject matter.

The examiner also indicated that FIG. 1 should be labeled prior art. Applicant has enclosed herewith proposed drawing changes with changes marked in red. Approval of the changes is requested. Applicant has amended FIG. 1 to include a reference to the diversity process 50 (described in FIG. 2) and has amended the specification to add a diversity process 50 (as will be further discussed below) to show a novel feature in FIG. 1. This change as well as the accompanying change to the specification overcomes the objection. No new matter has been added.

The Examiner rejected claims 1-12 and 22 under 35 U.S.C. 102(e) as being anticipated by DeMarcken et al., U.S. Patent 6,377,932.

Applicant has amended claim 1 to more particularly point out Applicant's invention. Applicant's claim 1, as now amended, recites ... reducing a larger set of travel options to a smaller set of diverse travel options in accordance with a set of diverse travel requirements that represent conditions for a travel option to be considered for inclusion in the set of diverse travel options. This feature is neither described nor suggested by DeMarcken.

The Examiner takes the position that DeMarcken's teaching of a pricing graph and extracting correspond to a larger set and a smaller set of diverse travel options. While DeMarcken describes extracting from a pricing graph a set of travel options that may be smaller than the set of travel options represented by the pricing graph, this teaching does not describe reducing a larger set to... a smaller set in accordance with a set of diverse travel requirements

that represent conditions for a travel option to be considered for inclusion in the set of diverse travel options, as now claimed.

One of the advantages of this technique if used in a travel planning system is that the system can provide better travel options by maximizing the chance of generating a good option by enforcing diversity in the set of options generated.

Claims 2-9, which depend directly or indirectly on claim 1, are allowable at least for the reasons discussed in claim 1.

Claim 10 as amended recites ... generating one or more travel options that are best for each of a set of travel preference functions to provide a set of diverse travel options. This feature is not described by DeMarcken.

The examiner takes the position that DeMarcken describes travel preference functions at Col 49 lines 42-67. These teachings of enumeration functions, which will extract from a pricing graph pricing solutions that satisfy a certain criterion, do not describe generating one or more travel options that are best for each of a set of travel preference functions.

While DeMarcken (6,377,932) col. 49, 62-67 does describe a range of valuation functions that can be used to extract from a larger set of travel options a smaller set, it does not suggest that multiple such valuation functions could be used to extract answers from a single travel query as a way to ensure that the final set of travel options is diverse. For example, one could generate a diverse set by using many different optimization functions (cheapest, most convenient, quickest, etc) to insure diversity. Further, DeMarcken's teachings do not describe claim 10 since there is no suggestion of generating a diverse set of options.

Accordingly claims 10 and claims 11-12, which depend directly or indirectly on claim 10, are distinct over DeMarcken.

The examiner rejected claim 22 in the summary of this rejection but in the body apparently meant to reject claim 21.

Claim 21 recites a travel planning system that outputs a set of travel options smaller than a complete set of travel options that the server has computed by pruning the larger set of options to a smaller set with a diversity-based pruning process. A diversity based pruning process is not described in DeMarcken. Thus, claim 21 is distinct over DeMarcken.

The Examiner rejected claims 13-20 and 22-24 under 35 U.S.C. 103(a) as being obvious over DeMarcken et al., U.S. Patent 6,377,932 in view of Webber U.S. Patent 5,331,546.

Claim 13 recites ... generating a prioritized ordered list of requirements Rs. This feature is neither described nor suggested by the references. Claim 13 also recites sorting the list of travel options Ts by an ordering function F to produce a best-first ordered list Ts2 with the list of options being optimized travel options for a set of travel requirements R in accordance with the ordering function F. This feature is also neither described nor suggested by the references.

The examiner takes the position that DeMarcken teaches the sorting action but fails to expressly teach the prioritized ordered list of requirements, but does teach applying the requirements in a specific order. The examiner relies upon Webber for this teaching. Applicant disagrees.

DeMarcken does not teach a list of requirements and specifically does not teach sorting the list of travel options ... with the list of options being optimized travel options for a set of travel requirements. A set of travel requirements is not suggested in DeMarcken.

Webber also fails to provide this teaching. The examiner contends that steps from Webber's FIG. 4a, describe prioritized ordered list of requirements.

The steps relied on by the Examiner do not correspond to prioritized ordered list of requirements. Rather, those steps are used as part of a flight search algorithm. At that junction in the process described by Webber, Webber does not possess a set of travel options. Hence, Webber certainly does not possess sorting a set of travel options by an ordering function F to produce a best-first ordered list Ts2 with the list of options being optimized travel options for a set of travel requirements R in accordance with the ordering function F. Neither the set of travel options nor the ordering function is present in Webber.

Claims 14- 20 add distinct features. For example, claim 14 recites initializing the list of result travel options Rts to be empty; and if the remaining list of requirements Rs is empty, returning an ordered list of diverse travel options Rts. Webber does not teach a list of requirements and hence does not teach to return an ordered list of diverse travel options if the list of requirements is empty.

Claim 15 distinguishes by reciting... if the remaining list of requirements Rs is not empty, selecting a first travel requirement R from the ordered list of requirements (Rs) and removing a requirement R from the requirement list (Rs).

Similarly claims 16-20 add distinct features.

Claims 22-24, which depend on claim 21 are distinct over the references for the reasons discussed in claim 21, and since the references do not suggest instructions to generate a diverse list of N travel options Rts from a larger list of travel options Ts. The references also do not suggest instructions to generate a prioritized ordered list of requirements Rs, sort the list of travel options Ts by an ordering function F to produce a best-first ordered list Ts2 with the list of options being optimized travel options for a set of travel requirements R in accordance with the ordering function F. As mentioned, Webber does not teach a list of travel requirements.

Claims 23 and 24 add additional distinct features.

Applicant has added new claim 25, which depends on claim 1 and recites evaluating for the travel requirements a set of travel preference functions that can be used to order travel option DeMarcken also does not suggest this feature

The art cited but not applied to the claims is seen as neither describing nor suggesting the subject matter of claims 1-25 whether taken separately or in combination with the cited art.

Attached is a marked-up version of the changes being made by the current amendment.
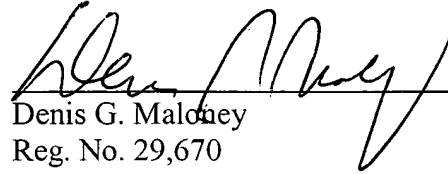
Applicant asks that all claims be allowed. Enclosed is a $18 check for excess claim fees and a $400 check for the Petition for Extension of Time fee. Please apply any other charges or credits to Deposit Account No. 06-1050.

Respectfully submitted,

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(Amended) 3. The method of claim 1 wherein reducing a larger set of travel options to a smaller set of diverse travel options comprises:

generating one or more desired travel options consistent with [a] the diversity of travel requirements.

(Amended) 10. A method for reducing a larger set of travel options to a smaller set of diverse travel options comprises:

generating one or more travel options that are best for each of a set of travel preference functions to provide a set of diverse travel options.

(Amended) 14. The method of claim 13 further comprising:

initializing the list of result travel options [RTs] Rts to be empty; and if the remaining list of requirements Rs is empty,

returning an ordered list of diverse travel options Rts.

(Amended) 15. The method of claim 14 further comprising:

initializing the list of result travel options [RTs] Rts to be empty; and if the remaining list of requirements Rs is not empty,

selecting a first travel requirement R from the ordered list of requirements (Rs); and

removing a requirement R from the requirement list (Rs).

(Amended) 19. The method of claim 18 wherein if the diversity process determines if a travel option T is not already in the result list Rts,

adding the travel option T to end of the result travel option list Rts; and

determining if the size of the travel option list [RTs] Rts is equal to or greater than N the process in order to return the ordered list of diverse travel options.

(Amended) 22. The travel planning system of claim [13] 21 wherein the diversity-based pruning process comprises instructions to cause the system to:

generate a diverse list of N travel options Rts from a larger list of travel options Ts,

Version with markings to show changes made

In the specification:

Paragraph beginning at page 4, line 10 has been amended as follows:

The system 10 also includes a plurality of clients 30a-30c implemented by terminals or preferably personal computers. The clients include monitors 40 to display travel options generally through a graphical user interface implemented as a web page, and so forth. The clients 30a-30c are coupled to the server 12 via a network 22, which is also used to couple the remote resources [(21a-21c)] 21a-21b that supply the databases 20a-20b to the server 12. The network 22 can be any local or wide area network or an arrangement such as the Internet. Typically, in response to a query from a client station, the server 12 will generate a list of travel options. The server or the client or an intermediate computer includes a diversity process 50 (as will be further discussed below) to insure that if the list of travel options is relatively long, a diverse set of those travel options will be displayed on the client systems 30. The client can include a client process 36 and is fed a diverse set of travel options from a larger set 26 that is determined by the server 12.

In the claims:

Claims 1-3, 10, 14, 15, 19, 22-24 have been amended as follows:

(Amended) 1. A method for providing a set of travel options comprises:

reducing a larger set of travel options to a smaller set of diverse travel options in accordance with a set of diverse travel requirements that represent conditions for a travel option to be considered for inclusion in the set of diverse travel options.

(Amended) 2. The method of claim 1 wherein reducing a larger set of travel options to a smaller set of diverse travel options comprises:

generating one or more travel options consistent for each of [a] the diversity of travel requirements.

generate a prioritized ordered list of requirements Rs;

sort the list of travel options Ts by an ordering function F to produce a best-first ordered

list Ts2 with the list of options being optimized travel options for a set of travel requirements R

in accordance with the ordering function F.

(Amended) 23.   The travel planning system of claim 23 further comprising

instructions to cause the system to:

initialize the list of result travel options [RTs] Rts to be empty; and if the remaining list

of requirements Rs is empty,

return an ordered list of diverse travel options Rts.

(Amended) 24.   The travel planning system of claim 24 further comprising

instructions to cause the system to:

initialize the list of result travel options [RTs] Rts to be empty; and if the remaining list

of requirements Rs is not empty,

select a first travel requirement R from the ordered list of requirements (Rs); and

remove a requirement R from the requirement list (Rs).